

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Procedures to Govern the Use of)	
Satellite Earth Stations on Board Vessels)	IB Docket No. 02-10
in the 5925-6425 MHz/3700-4200 MHz Bands)	
and 14.0-14.5 GHz/11.7-12.2 GHz Bands)	

COMMENTS OF SES AMERICOM, INC.

SES AMERICOM, Inc. (“SES AMERICOM”), by its attorneys and pursuant to Section 1.415 of the Commission’s Rules, submits these Comments in response to the Commission’s Notice of Proposed Rulemaking (“*Notice*”) in the above-captioned proceeding.¹

SES AMERICOM welcomes the Commission’s efforts to develop rules that will permit operation of earth stations on vessels (“ESVs”) in both the C-band and the Ku-band. As the Commission noted, ESVs can extend broadband telecommunications services to maritime consumers, which furthers the Commission’s goals of expanding broadband availability and using spectrum efficiently. *Notice* at ¶ 3. ESVs also can contribute to national security by facilitating communications between the Department of Homeland Security and

¹ *Procedures to Govern the Use of Satellite Earth Stations on Board Vessels in the 5925-6425 MHz/3700-4200 MHz Bands and 14.0-14.5 GHz/11.7-12.2 GHz Bands*, Notice of Proposed Rulemaking, IB Docket No. 02-10, FCC 03-286 (Nov. 24, 2003) (“*Notice*”).

ships coming into U.S. ports. *Id.* at ¶ 23. Finally, the Commission’s proposals are consistent with the decision reached at the 2003 World Radiocommunication Conference (“WRC-03”) regarding ESV operation. *Id.* at ¶ 2.

SES AMERICOM agrees that ESVs offer important consumer benefits and can be implemented in a way that will not create interference for incumbent operations. Furthermore, we strongly support Commission action to implement in the United States the international agreement on ESVs reached at WRC-03 in order to permit ESV operators to take advantage of a global spectrum designation. Accordingly, we urge the Commission to adopt policies that will facilitate the deployment of ESVs and provide greater regulatory certainty to ESV operators. We provide specific recommendations below regarding some of the technical and policy issues raised in the *Notice*.

I. ESV OPERATIONS SHOULD BE PERMITTED IN BOTH THE C-BAND AND THE KU-BAND

As a threshold matter, SES AMERICOM strongly supports the Commission’s proposal to permit ESVs to operate in both the C-band and the Ku-band. *Notice* at ¶ 1. As the Commission notes, this is consistent with the resolution adopted at WRC-03, which expressly contemplates ESV operation in both these bands. *Id.* at ¶ 2.

SES AMERICOM acknowledges that the extensive use of the C-band by terrestrial wireless operations creates sharing issues that do not arise to the same extent in the Ku-band. However, we also recognize that C-band spectrum can be preferable for other reasons. For example, the Commission notes that Maritime

Telecommunications Network has indicated that C-band satellites tend to have a broader coverage area than Ku-band spacecraft and typically offer more bandwidth than is commercially available from Ku-band satellites. *Id.* at ¶ 11.

As an operator of both C- and Ku-band satellites, SES AMERICOM can confirm that typically C-band spacecraft have more significant coverage of coastal and ocean regions than do Ku-band spacecraft. In both bands, satellites' coverage areas are generally optimized for service over land. Because there is a faster "roll-off" of the signal strength in Ku-band than in C-band, Ku-band coverage of important maritime routes is more limited.

As demand grows, more operators may deploy satellites with enhanced coverage of oceans and coastal areas. For example, SES AMERICOM is building a satellite that will substantially increase its Ku-band coverage of the Pacific Ocean. In the shorter term, however, coverage limitations of Ku-band satellites are likely to affect the desirability of Ku-band spectrum for ESV fleets.

In light of these issues, SES AMERICOM urges the Commission to promulgate policies that ensure that ESV operators can use both C-band and Ku-band spectrum. The Commission should avoid placing unnecessary burdens on ESV operations in either band.

**A. The Commission Should Not Limit
ESVs' C-Band Downlink Spectrum**

The Commission's rules should ensure that ESVs have access to the greater coverage of shoreline and ocean routes currently provided by C-band

satellites.² If the Commission imposes limits on C-band operations that are too onerous or too restrictive, the public interest benefits of ESV deployment will be jeopardized.

In particular, SES AMERICOM urges the Commission not to limit the downlink spectrum that can be used by C-band ESVs. The *Notice* proposes two approaches to ESV licensing in the C-band: one that would require coordination prior to operation to prevent interference (the “Coordination Approach”), and one that would provide shorter-term licenses with no coordination (the “Non-Coordination Approach”). *Notice* at ¶¶ 63, 69. Under the Coordination Approach, the Commission proposes to limit ESV operators to 36 megahertz of uplink spectrum and 36 megahertz of downlink spectrum. *Id.* at ¶ 69.

SES AMERICOM objects to the Commission’s proposal to place limits on downlink bandwidth under the Coordination Approach to C-band licensing. The 36 MHz limit represents an unnecessary restriction on ESV operations that will have no effect on potential interference. Satellite downlinks pose no interference threat to terrestrial operations because the power levels of satellite signals are very low when they reach earth. Instead, satellite receivers are potential victims of interference from nearby terrestrial systems. Even under the Coordination Approach, however, ESV receivers will operate on a non-protected basis. As a

² *Notice* at ¶ 61 (acknowledging that the C-band may be the only option available to ESVs in certain locations and for certain types of services.)

result, ESV licensees will not be entitled to request protection from any interference caused by terrestrial operations.

Under these circumstances, the proposed downlink bandwidth restrictions in the C-band serve no purpose. The Commission should not impose a restriction on ESVs that provides no benefits to other operators in the band.

B. Ku-Band ESVs Should Be Permitted on All Vessels

SES AMERICOM also opposes the Commission's proposed 300-ton vessel weight requirement with respect to Ku-band ESVs.³ The Commission notes that smaller vessels can operate in shallower water and can thus travel farther inland. The proposed weight limitation is designed to lessen the potential for conflict between ESVs on these smaller vessels and terrestrial Ku-band operations. *Id.* at ¶ 54.

As the Commission recognizes, however, the potential for harmful interference is minimal in the Ku-band because few terrestrial services operate in that spectrum. *Id.* at ¶ 29. The Commission should therefore avoid imposing broad restrictions on use of the Ku-band by ESVs unless absolutely necessary. This is particularly true where, as here, the result would be to deny the safety and convenience features of satellite communications to a substantial category of vessels.

³ Notice at ¶ 54. The Commission proposes the same 300-ton vessel weight requirement for C-band ESV operations. *Id.* at ¶ 70.

II. THE COMMISSION SHOULD ADOPT STREAMLINED PROCEDURES FOR ESV LICENSING

In order to obtain the public benefits of ESV deployment, the Commission should ensure that the requirements imposed on ESVs to obtain licenses under the new system are not unduly burdensome. As far as possible, ESV licensing requirements should be consistent with the Commission's current rules, and additional requirements should be imposed only where they are necessary to prevent harmful interference.

A. Blanket Licensing of ESVs Should Be Available

The Commission proposes a blanket licensing system for both Ku-band and C-band ESVs. *Notice* at ¶¶ 48-49, 79. SES AMERICOM strongly supports these proposals. Until now, ESV operations have been permitted only through grants of Special Temporary Authority ("STA"). *Id.* at ¶¶ 9-10, 24-25. This reliance on STAs for operating authority, as the Commission noted, has been burdensome both for operators and for the Commission itself. *Id.* at ¶ 24. A blanket licensing framework will substantially ease licensing burdens by allowing ESVs to operate under a single network-wide license rather than requiring site-by-site licensing, and will provide greater regulatory certainty to ESV operators.

For the Ku-band, the Commission proposes a licensing system that would be based on the requirements currently applicable to very small aperture terminals (VSATs). *Id.* at ¶ 48-49. SES AMERICOM agrees that given the similarities between ESVs and VSATs operating in the Ku-band, the same licensing framework should work equally well for both.

For C-band ESV operations, the Commission proposes to model its requirements on the rules permitting C-band small aperture terminals (CSATs). *Id.* at ¶ 79. SES AMERICOM generally supports the application of the CSAT rules to C-band ESVs. However, as noted above, we oppose the imposition of downlink spectrum limits on C-band ESV operations.

B. Application of Part 25 Technical Standards to ESVs Is Appropriate

The Commission seeks comment on the technical requirements for ESV operations that are necessary to protect adjacent fixed satellite service (“FSS”) systems from interference. *Id.* at ¶¶ 53, 55-56, 86. Specifically, the Commission notes that it has established rules in both the Ku-band and the C-band that specify the technical standards that antennas must meet in order to qualify for “routine” processing. Applicants seeking to deploy antennas that do not satisfy these standards are subject to additional requirements designed to ensure that the proposed operations will not cause harmful interference to adjacent satellites.

The *Notice* proposes to apply this framework to ESV antennas as well. Pursuant to these rules, C-band and Ku-band ESV antennas that conform to Commission technical requirements will be eligible for routine processing. Applicants proposing to use non-conforming ESV antennas will be required to make additional showings regarding interference risk. The Commission also notes that its *Part 25 Streamlining* proceeding includes a review of the standards for antennas

that qualify for routine processing, and that changes adopted in that rulemaking could also be extended to ESV antennas.⁴

For Ku-band operations, the Commission proposes that antennas have a pointing accuracy no worse than 0.2 degrees. *Notice* at ¶ 55. The Commission notes that this is consistent with the specifications of ITU-R Resolution 902 adopted by WRC-03. *Id.*

SES AMERICOM supports these proposals. We agree with the Commission that the Part 25 rules, as they may be modified in the *Part 25 Streamlining* proceeding, provide an appropriate technical framework for ESV operations. ESV antennas that comply with the applicable standards for routine processing should be treated on a streamlined basis under the Commission's rules. SES AMERICOM also supports the Commission's proposal to impose a 0.2 degree pointing accuracy requirement on Ku-band ESVs, as specified by Resolution 902.

III. TERMINALS ON STATIONARY OIL PLATFORMS SHOULD BE TREATED AS FIXED EARTH STATIONS

The Commission also seeks comment on the proper treatment of "oil rigs and similar fixed platforms at sea." *Notice* at ¶ 83. These fixtures typically remain in one place for six months or more. *Id.* at ¶ 27. SES AMERICOM recommends that oil platforms that remain stationary for a period of six months or

⁴ *Notice* at ¶ 53 & n. 92, citing *2000 Biennial Regulatory Review – Streamlining and Other Revisions of Part 25 of the Commission's Rules Governing the Licensing of, and Spectrum Usage by, Satellite Network Earth Stations and Space Stations*, IB Docket No. 00-248, Notice of Proposed Rulemaking, 15 FCC Rcd 25128 (2000).

more should be treated as fixed earth stations, not as ESVs. This approach is consistent with the Commission's past decisions to treat stations as fixed if they remain in the same place for at least six months. *Id.* at ¶ 44. In addition, SES AMERICOM suggests that operators of satellite terminals on oil platforms that remain stationary for less than six months have the option of licensing the facilities as temporary fixed earth stations, rather than ESVs, pursuant to Section 25.277 of the Commission's rules.

CONCLUSION

SES AMERICOM respectfully requests that the Commission adopt licensing rules that facilitate ESV deployment and implement the WRC-03 agreement, consistent with the recommendations made in these comments.

Respectfully submitted,

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